

Notice of Allowability

Application No.

10/075,004

Applicant(s)

LUO, JIEBO

Examiner

Wes Tucker

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed August 18th 2006.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed August 18th 2006 has been entered and made of record.
2. Applicant has amended claims 1, 4, 5, 10, 11, 14, and 15. Applicant has added new claims 19-26.
3. Applicant's remarks in view of the presented amendments have been fully considered and are found to be persuasive. Claims 1-26 are found to be allowable. reasons for allowance are given below.

Claim Rejections - 35 USC § 101

4. The previously presented rejection of claim 10 as being non-statutory subject matter is withdrawn in view of the amendment to claim 10.

Claim Rejections - 35 USC § 112

5. The previously presented rejection of claims 5 and 15 as being non-enabled have been withdrawn in view of the amendments to claims 5 and 15.
6. The previously presented 112 second paragraph rejection of claims 1-18 as being indefinite because of the use of the word semantic has been withdrawn.

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Applicant remarks have made the record clear about the definition of the term semantic in the context of the invention.

Allowable Subject Matter

7. Claim 1-26 are allowed.

The following is an examiner's statement of reasons for allowance:

Applicant's remarks clarify the differences between the cited reference to Sugiura and the presently claimed invention. The claims have also been further amended to clarify their scope. Sugiura discloses determining the estimated orientation of sub-images or image portions. This estimation is performed by examining text in each sub-image and assigning a calculated degree of reliability to each sub-image. According to the calculated degree of liability the final estimation of orientation is made according to the sub-image with the highest determined. As Applicant explains, the recited claims determine a semantic object orientation determination (interpreted as text in Sugiura), as well as a scene layout orientation detection (interpreted as the sub-image orientation estimates) and finally arbitrating between the two estimates. This is where the recited claims differ from Sugiura. In Sugiura the text orientation estimation and the scene orientation are linked and are not arbitrated between. In the recited independent claims 1, 11 and 22 the two estimations are performed separately and then arbitrated in between. Neither Sugiura nor any of the other found prior art of record discloses or fairly teaches performing a semantic object detection and orientation estimation, performing a scene layout detection estimation, and then arbitrating between the two

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different estimations. Therefore Independent claims 1, 11 and 22 and all of the corresponding dependent claims are found to be allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

8. The following prior art has been cited as related found prior art that is patentably distinct from the present invention.

U.S. Patent 6,968,094 to Gallagher discloses estimating and correcting camera rotation using a vanishing point calculation.

U.S. Patent 6,411,743 to Koh et al. discloses a region separating of an image and determining orientation of the image from the text in the regions similar to the cited reference to Sugiura.

U.S. Patent 6,529,641 to Chakraborty discloses an incremental rotation correction method for correcting skew in a scanned image of text.

U.S. Patent 6,137,905 to Takaoka discloses a character recognition and orientation determination for a scanned document image containing text.

U.S. Patent 5,862,249 to Jang discloses imaging a body in a radiographic image and using the body part detection to aid in position correction.

U.S. Patent 5,642,443 to Goodwin discloses an orientation processing that detects scene characteristics and their distribution for a group of images in order to calculate the probability of orientation for the group.

U.S. Patent 6,512,846 to Luo (the same present inventor) discloses the use of blue sky to determine the orientation of images.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-2214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Wes Tucker

11-1-06


BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600